Research Paper

Medical Science



Diaper Dermatitis Coping Methods in Primary Care, Patients' Beliefs and Habits

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ABSTRACT

Objective: The study was planned as a descriptive research parents' beliefs, habits about diaper dermatitis for their 0-24 months age of infants in primary care.

Method: 0-24 months year old babies who were presented with diaper dermatitis and their mothers who were volunteer was enrolled in research (n = 53). The data were obtained from mothers of infants who were admitted to family medicine center in Afyon..

Results: 25 babies participate in survey (47.2%) were male, 28 (52.8 %) babies were female and the average age of babies was 7.7 months old. Families' mean number of child in the family was 1.5. Diaper changing mean was 5.08 times a day . 28 parents (52.8%) were waiting for drying of diaper area before closing diaper area with napkin, 38 parents (71.7%) were airing diaper area after cleaning it. 11 parents (20.8%) were using powder after cleaning, 18 parents (34%) changed diaper label after diaper dermatitis.9 parents (17%) were using ointments for prevention from diaper dermatitis. 14 parents (33%) were using Hamamelis Virginiana Distillate (Hametan ©), 11 parents (26%) were using Isoconazole Nitrate Diflucortolone Valerate Cream (Travazol ©), 6 parent were using Dexpanthenol (Bepanthene ©) and 6 parents (14%) were using Tioconazole (Dermo-Trosyd©) for reatment.

Conclusion: Powder usage and using cleaning towels with alcohol is a great obsticle avoiding diaper dermatitis. Powder usage habit has to be prevented.

Keywords : Infant, diaper dermatitis, dermatitis

INTRODUCTION

Dermatitis, occurring in diaper area is called diaper dermatitis. It is the most common dermatologic disease in infants. 9 to 12 months are common ages and diaper dermatitis has a prevalence of 7 to 35 %. 1 Neonates, especially premature neonates, are at increased risk. 2 There is no ethnicity or gender difference. 3 It is thought to be occurring with irritant effects of friction, occlusion, maceration, urine, stool and chemicals. 4 Increased mobility of the child accounts for the friction that contributes to diaper dermatitis. 5

The most common form of primary irritant napkin dermatitis comprises confluent erythema of the convex surfaces in closest contact with the napkin, that is the buttocks, the genitalia, the lower abdomen and pubic area, and the upper thighs. The deeper parts of the groin flexures are generally spared.⁶

Skin dryness may be the first sign of diaper dermatitis. In early stages eriteme, mild maceration and edema could be seen. Then lesion begins to spread; maceration and eriteme increases. Ulcers and erosions occur in severe dermatitis. In advancing stages, Candida Albicans and secondary bacterial infections may occur.⁷ Infection occurs generally 48- 72 hours after irritation. If eruptions affect the inguinal area or satellite pustules occur and continue longer than 72 hours, candidiasis should be suspected. When bacterial infection is superimposed, superficial erosions, yellow crusts and impetiginization is seen.³ Allergic contact dermatitis should be considered when dermatitis persists despite treatment efforts. It generally appears in areas exposed to the napkin and spares the inguinal folds.² mothers towards diaper dermatitis and sociodemographic factors of patients with diaper dermatitis.

METHODS

We enrolled 53 patients mothers or fathers, attended to Afyon family medicine center no:5 in between 0 to 24 moths old. Patients who had systemic disease which leads to tendency having diaper dermatitis (e.g. continuing antibiotic usage for prevention urinary infection of vesicoureteral reflux) did not enrolled in the study. Patients who presented with lesions, which is sparing inguinal folds considered as allergic contact dermatitis and did not enrolled in the study.

A questionnaire/survey was prepared by using appropriate literature relevant to the purpose of this study. Approval for the study was obtained from Education Department of Ministry Of Health/ Ankara. Subjects were addressed about the survey and permissions were received from each one of them before administration of questionnaire.

RESULTS:

Babies who are enrolled in the study have a mean age of 7.7 months. 25 babies (47.2%) were male, 28 (52.8%) babies were female. 21 (39.6%) of them were given birth with delivery, 32 (60.4%) were given birth with ceserian sectio. One (1.9%) of fathers and one (1.9%) of mothers were illeterate. 23 mothers (43.4%) and 12 fathers(22.6%) were finished primary school or, just can read or write. 23 mothers (43.4%) and 33 fathers (62.3%) were finished secondary or high school. 6 mothers (11.3%) and 7 fathers (13.2%) were finished university

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changing mean was 5.08 times a day . 28 parents (52.8%) were waiting for drying of diaper area before closing diaper area with napkin, 38 parents (71.7%) were airing diaper area after cleaning it. 11 parents (20.8%) were using powder after cleaning, 18 parents (34%) changed diaper label after diaper dermatitis.

9 parents (17 %) were using ointments for prevention from diaper dermatitis.

14 parents (33%) were using Hamamelis Virginiana Distillate (Hametan ©), 11 parents (26%) were using Isoconazole Nitrate Diflucortolone Valerate Cream (Travazol ©), 6 parent were using Dexpanthenol (Bepanthene ©) and 6 parents (14%) were using Tioconazole (Dermo-Trosyd©) for treatment (Table1).

27 parents were using wet fabric without alcohol, wet cotton or wet towel, 25 parents (47%) were using cleaning towel with alcohol, 1 parent(2%) was using dry fabric for cleaning diaper area (Table 2).

DISCUSSION:

Basis of treatment of diaper dermatitis depends on accelerating healing of damaged skin and preventing from recurrensis.⁸ Thus, it is essential changing soiled diapers as quickly as possible and using disposable diapers, which have been engineered to absorb moisture into the diaper and reduce moisture against the skin.⁵ Newer disposable diapers engineered with absorbent gelling materials and microbreatheable materials appear to be associated with a decrease in diaper dermatitis.^{9,10} Our parents (n=53, 100%) were all using new kind of disposable diapers.

Diapers have to be changed frequently, and diaper area has to be aired enough.(for newborn, diapers have to be changed every hour; for infants, every 2 hours), [some articles say, every 3-4 hours]at least once in every night for babies who has 10-12 hours sleeping time).^{11,12,21} Our parents' changing diaper frequency was quite enough.

Factors increasing diaper dermatitis frequency are feeding with formula, feeding with cow milk , diarrhea ,cleaning diaper area with liquid detergents , powder usage , changing diaper infrequently, antibiotic usage, chronic urinary incontinency.^{1,4,7,16,17,19} We did not enroll patients with ongoing chronic (like chronic urinary incontinency) or acute (diarrhea or any disease need to use antibiotics) disease. None of parents were cleaning diaper area with liquid detergents.

Parents should avoid using powder and use ointments of zinc or dextpenthanol after changing every diaper for protection from diaper dermatitis. 17 % parents (n=9) were using ointments and that was not enough. If necessary, diapers labels should be changed and antifungal ointments which do not contain corticosteroids should be used if candida albicans infection exists.^{13,14, 15} Parents joined our survey warranted not to use powder.

Cleaning towels shouldn't contain alcohol.¹³ When we investigate ingredients of cleaning towels sold in the market, we found out that every label has alcohol in varying percentages and types. Almost half of parent in our survey were using those type of cleaning towel with alcohol.

It has been shown that exclusively breast-fed infants had lower rates of diaper dermatitis compared to formula-fed infants. Breast milk consumption is associated with higher fecal pH, further suggesting an influence of diet on fecal pH and diaper dermatitis risk.¹⁸ Our cases were not available for this kind of comparison because, some of our cases feeding with breast milk, while some of them feeding with formula and breast milk at the same time.

As a treatment, nystatine, chlotrimazole, nystatine-triamsinolon, hydrocortizone, chlotrimazole-betazone dipropionate, ketaconazole, zinc oxide and myconazole is commonly used.⁴

Ointment used for diaper dermatitis treatment was mentioned in results part of article. Hamamelis virginiana distillate (Hametan ©) and Isoconazole nitrate diflucortolone valerate cream (Travazol ©) were chosen as treatment ointments by 25 parents(59%).While diflucortolone valerate is a medium potent corticosteroid, it is not appropriate choice for treatment of babies with diaper dermatitis.

CONCLUSIONS

As a conclusion, powder usage and using cleaning towels with alcohol is a great obstacle avoiding diaper dermatitis. Diflucortolone valerate usage by parents and prescription by physician has to be prevented. Also powder usage habit has to be prevented. Newer superabsorbent diaper usage is common in parents, and developing technology and due to open trade market competition, they became more available and cheaper. We suggest further surveys with control groups investigating risk factors.

Table1: Ointment Used For Diaper Dermatitis Treatment

	n	%
Hamamelis Virginiana Distillate (Hametan ©)	14	33%
Isoconazole Nitrate Diflucortolone Valerate Cream (Travazol ©)	11	26%
Dexpanthenol (Bepanthene ©)	6	14%
Tioconazole (Dermo-Trosyd©)	6	14%

Table 2: Tools used for cleaning diaper area

	n	%
Wet fabric without alcohol Wet cotton Wet towel	27	51,0
Cleaning towel with alcohol (available in markets)	25	47,0
Dry fabric	1	2,0

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